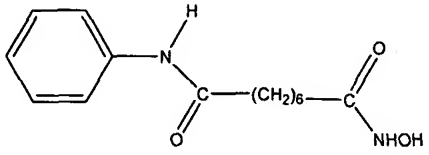
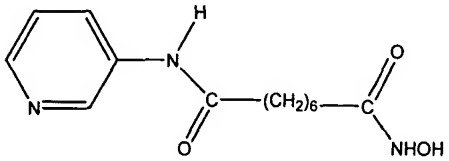
What is claimed is:

1. A method of treating mesothelioma in a subject, said method comprising the step of administering to the subject an effective amount of a pharmaceutical composition comprising a hydroxamic acid derivative histone deacetylase (HDAC) inhibitor, or a pharmaceutically acceptable salt or hydrate thereof, and a pharmaceutically acceptable carrier or diluent, wherein the amount of histone deacetylase inhibitor is effective to treat mesothelioma in said subject.

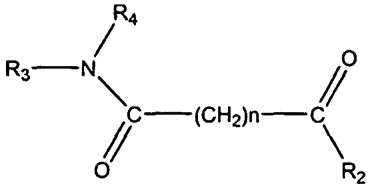
2. The method of claim 1, wherein the HDAC inhibitor is suberoylanilide hydroxamic acid (SAHA), represented by the structure:



3. The method of claim 1, wherein the HDAC inhibitor is pyroxamide, represented by the structure:

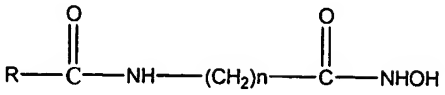


4. The method of claim 1, wherein the HDAC inhibitor is represented by the structure:



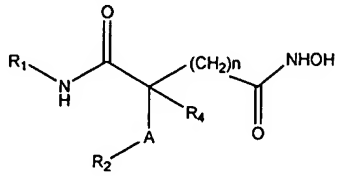
wherein R_3 and R_4 are independently a substituted or unsubstituted, branched or unbranched alkyl, alkenyl, cycloalkyl, aryl, alkyloxy, aryloxy, arylalkyloxy, or pyridine group, cycloalkyl, aryl, aryloxy, arylalkyloxy, or pyridine group, or R_3 and R_4 bond together to form a piperidine group; R_2 is a hydroxylamino group; and n is an integer from 5 to 8.

5. The method of claim 1, wherein the HDAC inhibitor is represented by the structure:



wherein R is a substituted or unsubstituted phenyl, piperidine, thiazole, 2-pyridine, 3- pyridine or 4-pyridine and n is an integer from 4 to 8.

6. The method of claim1, wherein the HDAC inhibitor is represented by the structure:



wherein A is an amide moiety, R_1 and R_2 are each selected from substituted or unsubstituted aryl, arylalkyl, naphthyl, pyridineamino, 9-purine-6-amino, thiazoleamino, aryloxy, arylalkyloxy, pyridyl, quinolinyl or isoquinolinyl; R_4 is hydrogen, a halogen, a phenyl or a cycloalkyl moiety and n is an integer from 3 to 10.

7. The method of claim 1, wherein the HDAC inhibitor is selected from the group consisting of m-carboxycinnamic acid bishydroxamide (CBHA), Trichostatin A (TSA), Trichostatin C, Salicylihydroxamic Acid (SBHA), Azelaic Bishydroxamic Acid (ABHA), Azelaic-1-Hydroxamate-9-Anilide (AAHA), 6-(3-Chlorophenylureido) carpoic Hydroxamic Acid (3Cl-UCHA), Oxamflatin, A-161906, Scriptaid, PXD-101, LAQ-824, CHAP, MW2796, and MW2996.

8. The method of claim 1, wherein the pharmaceutical composition is administered orally.

9. The method of claim 8, wherein said composition is contained within a gelatin capsule.

10. The method of claim 9, wherein said carrier or diluent is microcrystalline cellulose.

11. The method of claim 10, further comprising sodium croscarmellose as a disintegrating agent.

12. The method of claim 11, further comprising magnesium stearate as a lubricant.

13. The method of claim 8, wherein said composition is administered to the subject at a total daily dosage of between about 25-4000 mg/m^2.

14. The method of claim 8, wherein said composition is administered once-daily, twice-daily or three times-daily.

15. The method of claim 14, wherein said composition is administered once daily at a dose of about 200-600 mg.

16. The method of claim 14, wherein said composition is administered twice daily at a dose of about 200-400 mg.

17. The method of claim 14, wherein said composition is administered twice daily at a dose of about 200-400 mg intermittently.

18. The method of claim 17, wherein said composition is administered three to five days per week.

19. The method of claim 17, wherein said composition is administered three days a week.

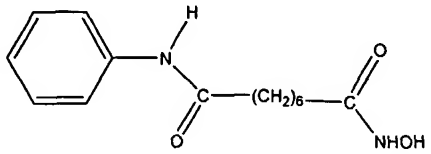
20. The method of claim 19, wherein said composition is administered at a dose of about 200 mg.

21. The method of claim 19, wherein said composition is administered at a dose of about 300 mg.

22. The method of claim 19, wherein said composition is administered at a dose of about 400 mg.

23. The method of claim 8, wherein said composition is administered three times-daily.

24. A method of treating mesothelioma in a subject, said method comprising the step of administering to the subject an effective amount of a pharmaceutical composition comprising suberoylanilide hydroxamic acid (SAHA) or a pharmaceutically acceptable salt or hydrate thereof, represented by the structure:



and a pharmaceutically acceptable carrier or diluent, wherein the amount of SAHA is effective to treat mesothelioma in said subject.

25. The method of claim 24, wherein the pharmaceutical composition is administered orally.

26. The method of claim 25, wherein said composition is contained within a gelatin capsule.

27. The method of claim 26, wherein said carrier or diluent is microcrystalline cellulose.

28. The method of claim 27, further comprising sodium croscarmellose as a disintegrating agent.

29. The method of claim 28, further comprising magnesium stearate as a lubricant.

30. The method of claim 25, wherein said composition is administered to the subject at a total daily dosage of between about 25-4000 mg/m^2.

31. The method of claim 25, wherein said composition is administered once-daily, twice-daily or three times-daily.

32. The method of claim 31, wherein said composition is administered once daily at a dose of about 200-600 mg.

33. The method of claim 31, wherein said composition is administered twice daily at a dose of about 200-400 mg.

34. The method of claim 31, wherein said composition is administered twice daily at a dose of about 200-400 mg intermittently.

35. The method of claim 34, wherein said composition is administered three to five days per week.

36. The method of claim 34, wherein said composition is administered three days a week.

37. The method of claim 36, wherein said composition is administered at a dose of about 200 mg.

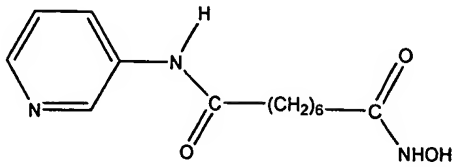
38. The method of claim 36, wherein said composition is administered at a dose of about 300 mg.

39. The method of claim 36, wherein said composition is administered at a dose of about 400 mg.

40. The method of claim 25, wherein said composition is administered three times-daily.

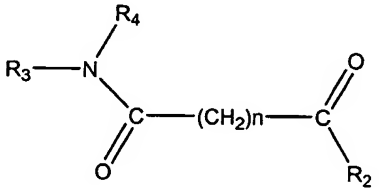
41. A method of treating mesothelioma in a subject, said method comprising the step of administering to the subject an effective amount of a pharmaceutical composition

comprising pyroxamide or a pharmaceutically acceptable salt or hydrate thereof, represented by the structure:



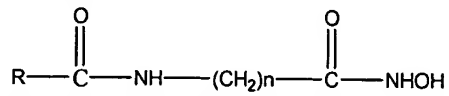
and a pharmaceutically acceptable carrier or diluent, wherein the amount of pyroxamide is effective to treat mesothelioma in said subject.

42. A method of treating mesothelioma in a subject, said method comprising the step of administering to the subject an effective amount of a pharmaceutical composition comprising a histone deacetylase inhibitor or a pharmaceutically acceptable salt or hydrate thereof, represented by the structure:



wherein R_3 and R_4 are independently a substituted or unsubstituted, branched or unbranched alkyl, alkenyl, cycloalkyl, aryl, alkyloxy, aryloxy, arylalkyloxy, or pyridine group, cycloalkyl, aryl, aryloxy, arylalkyloxy, or pyridine group, or R_3 and R_4 bond together to form a piperidine group; R_2 is a hydroxylamino group; and n is an integer from 5 to 8, and a pharmaceutically acceptable carrier or diluent, wherein the amount of histone deacetylase inhibitor is effective to treat the mesothelioma in said subject.

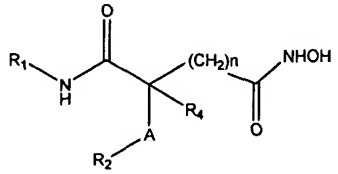
43. A method of treating mesothelioma in a subject, said method comprising the step of administering to the subject an effective amount of a pharmaceutical composition comprising a histone deacetylase inhibitor or a pharmaceutically acceptable salt or hydrate thereof, represented by the structure:



wherein R is a substituted or unsubstituted phenyl, piperidine, thiazole, 2-pyridine, 3- pyridine or 4-pyridine and n is an integer from 4 to 8, and a pharmaceutically

acceptable carrier or diluent, wherein the amount of histone deacetylase inhibitor is effective to treat the mesothelioma in said subject.

44. A method of treating mesothelioma in a subject, said method comprising the step of administering to the subject an effective amount of a pharmaceutical composition comprising a histone deacetylase inhibitor or a pharmaceutically acceptable salt or hydrate thereof, represented by the structure:

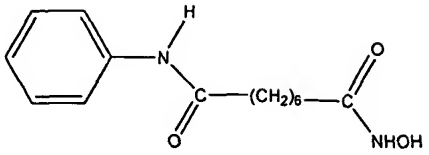


wherein A is an amide moiety, R_1 and R_2 are each selected from substituted or unsubstituted aryl, arylalkyl, naphthyl, pyridineamino, 9-purine-6-amino, thiazoleamino, aryloxy, arylalkyloxy, pyridyl, quinolinyl or isoquinolinyl; R_4 is hydrogen, a halogen, a phenyl or a cycloalkyl moiety and n is an integer from 3 to 10, and a pharmaceutically acceptable carrier or diluent, wherein the amount of histone deacetylase inhibitor is effective to treat the mesothelioma in said subject.

45. A method of treating mesothelioma in a subject, said method comprising the step of administering to the subject an effective amount of a pharmaceutical composition comprising a histone deacetylase inhibitor selected from the group consisting of m-carboxycinnamic acid bishydroxamide (CBHA), Trichostatin A (TSA), Trichostatin C, Salicylihydroxamic Acid (SBHA), Azelaic Bishydroxamic Acid (ABHA), Azelaic-1-Hydroxamate-9-Anilide (AAHA), 6-(3-Chlorophenylureido) carpoic Hydroxamic Acid (3Cl-UCHA), Oxamflatin, A-161906, Scriptaid, PXD-101, LAQ-824, CHAP, MW2796, and MW2996, or a pharmaceutically acceptable salt or hydrate thereof, wherein the amount of histone deacetylase inhibitor is effective to treat the mesothelioma in said subject.

46. A method of treating mesothelioma in a subject, said method comprises the step of administering to the subject a total daily dose of up to about 800 mg of a pharmaceutical composition comprising suberoylanilide hydroxamic acid (SAHA)

or a pharmaceutically acceptable salt or hydrate thereof, represented by the structure:



and a pharmaceutically acceptable carrier or diluent, wherein the mesothelioma in said subject is treated.

47. The method of claim 46, wherein the pharmaceutical composition is administered orally.

48. The method of claim 47, wherein said composition is contained within a gelatin capsule.

49. The method of claim 48, wherein said carrier or diluent is microcrystalline cellulose.

50. The method of claim 49, further comprising sodium croscarmellose as a disintegrating agent.

51. The method of claim 50, further comprising magnesium stearate as a lubricant.

52. The method of claim 47, wherein said composition is administered once-daily, twice-daily or three times-daily.

53. The method of claim 52, wherein said composition is administered once daily at a dose of about 200-600 mg.

54. The method of claim 52, wherein said composition is administered twice daily at a dose of about 200-400 mg.

55. The method of claim 52, wherein said composition is administered twice daily at a dose of about 200-400 mg intermittently.

56. The method of claim 55, wherein said composition is administered three to five days per week.

57. The method of claim 55, wherein said composition is administered three days a week.

58. The method of claim 57, wherein said composition is administered at a dose of about 200 mg.

59. The method of claim 57, wherein said composition is administered at a dose of about 300 mg.

60. The method of claim 57, wherein said composition is administered at a dose of about 400 mg.

61. The method of claim 47, wherein said composition is administered three times-daily.